CLAIMS

1. A process for deriving dendritic cells from mononuclear cells in culture, wherein said cells are peripheral blood mononuclear cells (PBMC) or CD14+ monocytes, comprising the step of putting in contact said mononuclear cells with type I interferon (IFN) at a final concentration greater than 100 IU/ml, since the initial culture thereof.
2. The process according to claim 1, wherein said step is carried out within 3 days of culture.
3. The process according to claim 1, wherein said type I IFN used is selected from the group consisting of any natural IFNα, any recombinant species of IFNα, natural or recombinant IFNβ and any synthetic type I IFN.
4. The process according to claim 2, wherein said type I IFN used is selected from the group consisting of any natural IFNα, any recombinant species of IFNα, natural or recombinant IFNβ and any synthetic type I IFN.
5. The process according to claim 1, wherein said final concentration is in a range of 100-10,000 IU/ml.
6. The process according to claim 2, wherein said final concentration is in a range of 100-10,000 IU/ml.
7. The process according to claim 5, wherein said final concentration is in a range of 400-10,000 IU/ml.
8. The process according to claim 6, wherein said final concentration is in a range of 400-10,000 IU/ml.
9. The process according to claim 7, wherein said final concentration is in a range of 500-2,000 IU/ml.
10. The process according to claim 8, wherein said final concentration is in a range of 500-2,000 IU/ml.

11. The process according to claim 9, wherein said final concentration is 1,000 IU/ml.

12. The process according to claim 10, wherein said final concentration is 1,000 IU/ml.

13. The process according to claim 1, wherein said step is carried out in presence of a cell growth factor.

14. The process according to claim 2, wherein said step is carried out in presence of a cell growth factor.

15. The process according to claim 13, wherein said growth factor is GM-CSF.

16. The process according to claim 14, wherein said growth factor is GM-CSF.

17. The process according to claim 15, wherein said GM-CSF is used at a concentration in a range of 250-1,000 U/ml.

18. The process according to claim 16, wherein said GM-CSF is used at a concentration in a range of 250-1,000 U/ml.

19. The process according to claim 1, wherein said process further includes the step of putting in contact dendritic cells, obtained by treating mononuclear cells with type I IFN, with a maturation agent.

20. The process according to claim 2, wherein said process further includes the step of putting in contact dendritic cells, obtained by treating mononuclear cells with type I IFN, with a maturation agent.

21. The method of use of type I IFN as an agent allowing the ex vivo derivation of dendritic cells from mononuclear cells, the type I IFN being put in contact with said mononuclear cells, since the initial culture thereof and at a final concentration greater than 100 IU/ml.

22. The method of use according to claim 21, wherein said type I IFN is used in combination with a cell growth factor which can be GM-CSF.

23. The method of use according to claim 22, wherein said type I IFN concentration is in a range of 100-10,000 IU/ml.

24. The method of use according to claim 23, wherein said type I IFN concentration is in a range of 500-2,000 IU/ml.

25. The method of use according to claim 24, wherein said type I IFN concentration is 1,000 IU/ml.

26. Dendritic cells obtainable by the process according to claim 1.

27. Dendritic cells obtainable by the process according to claim 2.

28. The dendritic cells according to claim 26, said cells being loaded with antigenic peptides or proteins, or with a cellular extract containing at least one antigen, or with nucleic acids.

29. The dendritic cells according to claim 27, said cells being loaded with antigenic peptides or proteins, or with a cellular extract containing at least one antigen, or with nucleic acids.

30. A kit for deriving a dendritic cell from a mononuclear cell in culture, comprising

-the elements necessary for the culture and the washings, including bag(s), connecting tube(s),

-a composition comprising type I IFN and compatible additives,

-a composition comprising a cell growth factor and compatible additives, and

-a culture medium,

for simultaneous, separate or sequential use in the process according to claim 1.

31. A kit for deriving a dendritic cell from a mononuclear cell in culture, comprising

-the elements necessary for the culture and the washings, including bag(s), connecting tube(s),

Deleted page

-a composition comprising type I IFN and compatible additives,

-a composition comprising a cell growth factor and compatible additives, and

-a culture medium,

for simultaneous, separate or sequential use in the process according to claim 2.

32. A pharmaceutical composition comprising, as an active principle, the dendritic cells according to claim 1, together with a pharmaceutically acceptable carrier vehicle or auxiliary agent.

33. A pharmaceutical composition comprising, as an active principle, the dendritic cells according to claim 2, together with a pharmaceutically acceptable carrier vehicle or auxiliary agent.

34. A vaccine, comprising, as an active principle, the dendritic cells according to claim 1.

35. A vaccine, comprising, as an active principle, the dendritic cells according to claim 2.

36. A vaccine comprising, as an adjuvant, the dendritic cells according to claim 1 together with an immunogen and a pharmaceutically acceptable carrier vehicle or auxiliary agent.

37. A vaccine comprising, as an adjuvant, the dendritic cells according to claim 2 together with an immunogen and a pharmaceutically acceptable carrier vehicle or auxiliary agent.

38. A method for the treatment of a pathology associated with the presence of an antigen in the human body comprising the step of administering a pharmaceutical composition according to claim 32 to a subject in need thereof.

39. A method for the treatment of a pathology associated with the presence of an antigen in the human body comprising the step of administering a pharmaceutical

composition according to claim 33 to a subject in need thereof.

40. A method for the treatment of a pathology associated with the presence of an antigen in the human body comprising the step of administering a vaccine according to claim 34 to a subject in need thereof.

41. A method for the treatment of a pathology associated with the presence of an antigen in the human body comprising the step of administering a vaccine according to claim 35 to a subject in need thereof.

42. A method for the treatment of a pathology associated with the presence of an antigen in the human body comprising the step of administering a vaccine according to claim 36 to a subject in need thereof.

43. A method for the treatment of a pathology associated with the presence of an antigen in the human body comprising the step of administering a vaccine according to claim 37 to a subject in need thereof.

44. A method according to claim 40, wherein said pathology is an infection or a neoplastic disease.

45. A method according to claim 41, wherein said pathology is an infection or a neoplastic disease.

46. A method according to claim 42, wherein said pathology is an infection or a neoplastic disease.

47. A method according to claim 43, wherein said pathology is an infection or a neoplastic disease.

48. A method according to claim 38, wherein administration is located at the site of the infection or within the primary tumor.

49. A method according to claim 39, wherein administration is located at the site of the infection or within the primary tumor.

50. A method for the ex vivo expansion of T cells to be reinfused in a subject in need thereof, comprising the step of putting in contact said T

Deleted Page

cells with the dendritic cells according to claim 26.

51. A method for the ex vivo expansion of T cells to be reinfused in a subject in need thereof, comprising the step of putting in contact said T cells with the dendritic cells according to claim 27.

52. A method for the ex vivo expansion of T cells to be reinfused in a subject in need thereof, comprising the step of putting in contact said T cells with the dendritic cells according to claim 28.

53. A method for the ex vivo expansion of T cells to be reinfused in a subject in need thereof, comprising the step of putting in contact said T cells with the dendritic cells according to claim 29.

SUBSTITUTE SHEET (RULE 26)